

# SEMINAR



# SERIES

北京大学工学院

工业工程与管理系

## Optimizing Solar Supply Chain: A Stochastic Optimization Approach

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Zoom: ID (84674543387) Passcode (984289)

**摘要:** Reshaping the solar supply chain has attracted unprecedented attention in the US due to the ambition of the Biden administration in pursuit of net zero emissions by 2050. Yet, reestablishing manufacturers for solar PV modules in the US faces some great challenges, including but not limited to (i) reliance on global outsourcing for upstream materials, (ii) increasing uncertainty in global shipments, (iii) competition with cheaper PV modules produced in Asia. Given these issues, we focus on the problems arising from launching a solar PV module manufacturing plant in the U.S. Amid all the challenges, it becomes critical to design a dynamic planning policy which helps a local manufacturer carry out acquisition of upstream materials and an onsite production plan so that it can generate a profitable and stable supply of PV modules that serve the rising demand of solar energy in the US market.

**报告人简介:** Xiaohe received her Ph.D. from the Operations Research & Financial Engineering department at Princeton University with a bachelor's degree in Mathematics and Economics from UC San Diego. She has been working in the field of stochastic optimization and reinforcement learning (RL) under the supervision of Warren Powell at CASTLE Lab, with focuses on tackling the algorithmic challenges in computational stochastic optimization and learning. Her research mainly wraps around onedimensional stochastic search and its application to multi-dimensional problems, including optimizing stepsizes for stochastic gradient algorithms and improving policy search applied to supply chain problems. Xiaohe has broad interests in the application of RL to online bidding, supply chain management, pricing and the interplay between machine learning and RL.

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